

**QUALITY ASSURANCE/QUALITY CONTROL****SM 4020** (As published in SM 20<sup>th</sup>/21<sup>st</sup> Edition)

Facility Name: \_\_\_\_\_ VELAP ID \_\_\_\_\_

Assessor Name: \_\_\_\_\_ Inspection Date \_\_\_\_\_

**Relevant Aspect of Standards****Method  
Reference****Y****N****N/A****Comments**Interviews may omit MDL questions if ALL of the following are TRUE:

- TRUE false This analyte/method/matrix combination has been reviewed at a previous on-site assessment by VELAP.
- TRUE false The laboratory NEVER reports a result generated below the lowest calibration standard.
- TRUE false The laboratory's scope of accreditation does not include drinking water as a matrix for this method/analyte.
- TRUE false The laboratory's customer report does not state the laboratory's MDL.
- TRUE false The laboratory has provided documentation of annual Limit of Quantitation verification (or more frequent if required by method).

(1) Were MDLs (LODs) initially determined for each analyte and verified annually (See 3020 B.1.b)?

*NOTE: Annual verification for drinking water is required. Annual verifications are not required for other matrices when test results are not reported outside of the calibration range (2003 NELAC Chapter 5 Appendix D.1.2.1).*

4020 B.1.b

(2) Were MDLs determined over a 3 to 5 day period?

4020 B.1.b

(3) Were MDLs determined using several analysts? ("preferably")

4020 B.1.b

(4) Were MDLs verified for each new analyst?

*Note: MDL verification per analyst is not required when test results are not reported outside the calibration range.*

4020 B.1.b

(5) Were MDLs verified whenever instrument hardware or operating conditions were substantially modified?

4020 B.1.b

(6) Was the dynamic range (linear or second-order) determined before using a new method?

4020 B.1.c

(7) Was the dynamic range determined by successfully achieving all standard results within 10% of the target value? ("should")

4020 B.1.c

Notes/Comments:

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Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
(8) If not specified in a method, were at least 3 standards plus a blank used for calibration?	4020 B.2.a				
(9) Were correlation coefficients greater than or equal to 0.995 for analyses using multiple standards for a least-squares fit calibration? ("should")	4020 B.2.a				
(10) Were initial calibrations performed <b>daily</b> and whenever calibration verification acceptance criteria are not met?	4020 B.2.a				
(11) Were the acceptance criteria of calibration verifications between 80 to 120% ( <b>20<sup>th</sup> Ed</b> ) or 90 to 110 ( <b>21<sup>st</sup> Ed</b> )?	4020 B.2.b				
(12) Did standard used for Laboratory Fortified Matrix (LFM) spiking add less than or equal to 5% of the sample volume?	4020 B.3.d				
(13) Were LFM and (LFMD pairs or sample duplicate) used to evaluate accuracy and precision?	4020 B.3.d				
(14) Were duplicate samples or LFM/(LFMD pair or sample duplicate) included with each set of 20 or fewer samples?	4020 B.3.c,d				
(15) Were LFMs fortified before sample preparation?	4020 B.3.d				
(16) Were Laboratory Fortified Blank (LFB) concentrations prepared at approximately the mid-point of the calibration curve?	4020 B.3.b				

Notes/Comments: